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REMARKS

Favorable reconsideration and allowance of this application are requested.

By way of the amendment instructions above, the objected-to duplicate scope claims have been cancelled thereby rendering moot the issues raised by the Examiner under 37 CFR §1.75(c).

The pending independent claims have also been revised so as to emphasize certain aspects of the invention. Thus, for example, the claims have been amended so as to emphasize that the dense plurality of generally diamond-shaped apertures is associated with the *individual* pleats of the filter media. That the individual pleats of the filter media have a dense plurality of generally diamond shaped apertures associated therewith can clearly be seen in Figure 1 as originally filed.

The only issues remaining to be resolved in this application are the Examiner's art-based rejections of record. In this regard, claims 1-5, 7-11, 13, 15-17 and 20 have been rejected as allegedly "obvious", and hence unpatentable under 35 USC §103(a) over Shane (WO 00/45932) in view of Wojcienchowski (USP 5,636,749). Ashelin et al (USP 5,154,827) has been combined with Shane and Wojcienchowski to reject claims 6, 11, 14 and 18-19 under 35 USC §103(a). Applicants emphatically disagree.

At the outset, applicants note that the applied Shane publication is ineffective as a statutory reference against the claims at issue here. Specifically, the Examiner will recall that this application is related to parent application Serial No. 09/616,066 filed on July 13, 2000. Although the parent '066 application has now been abandoned in favor of the present application, copendency was present when this application was filed on July 13, 2001. Moreover, that the long dimension of the generally diamond-shaped apertures were oriented perpendicular to the cartridge axis was clearly presented in Figures 1 and 2 of the parent '066 application. In this regard, the Examiner is invited to

compare the copies of Figures 1 and 2 from the parent '066 application file appended hereto as Exhibits 1 and 2, respectively, with Figures 1 and 2 which were filed with the present application. The Shane publication, on the other hand, was published on August 10, 2000 – i.e., *after* the filing date of the parent '066 application. As such, the Shane publication is not effective as "prior art" against the present invention.

Notwithstanding the above, applicants also note that the combination of Shane and Wojciechowski to support a rejection under 35 USC §103(a) is inappropriate. Specifically, applicants respectfully take issue with the Examiner's characterization of the purported motivation provided by Wojciechowski to replace one of the support layers of Shane with the grid 24. In this regard, the Examiner asserts that:

"It is considered obvious to one of ordinary skill in the art at the time of the [present applicant's] invention to modify the filter cartridge of Shane by replacing each of the support layers with the embodiment [of the grid 24] taught by Wojciechowski, in order to provide an improved filter media support which has greater porosity, thereby allowing unobstructed and improved fluid flow therethrough and into the filter media/layer, at the same time, provide a support which is stable and will not corrode easily compared to its metallic counterparts."

It is respectfully suggested that the "suggestion" in Wojciechowski with respect to the orientation of apertures is *not*, as the Examiner purports, that greater porosity is achieved. Instead, as discussed in greater detail at column 5, lines 17-40, Wojciechowski is solely concerned with preventing wrinkles in the multi-layered screen. In order to achieve this non-wrinkled result, Wojciechowski teach that it is necessary for the longer sides 51 of the hexagonal polygons 50 to extend substantially perpendicularly across the peaks R of the ridges 31 and the shorter sides criss-cross

across the troughs T. (column 5, lines 1-5). Thus, each hexagonal polygon 50 of the grid 24 has "...halves which are substantially symmetrical about the peaks R of the ridges 31 and which extend substantially perpendicularly to the peaks and downwardly along the major portions of the sides 54 of the ridges 31." (column 5, lines 12-16.) In other words, according to Wojciechowski, it is critically important for individual ones of the apertures to essentially extend from trough-to-trough – certainly *not* a suggestion of a dense plurality of apertures being associated with each individual pleat of multi-layer filtration media.

The only mention of fluid flow is with respect to the positioning of the shorter sides 52. In this respect, Wojciechowski instruct that the criss-cross of the shorter sides 52 is important in order to provide open spaces in the troughs so that material does not "puddle". As is clear from the embodiments shown in Figures 6 and 7, however, such anti-puddling function is a result of the shape of the apertures and not the particular orientation of its "long" dimension.

Wojciechowski does not even suggest at all that generally diamond-shaped apertures are desirable. Indeed, the only reference to diamond-shaped apertures at all is with respect to the prior art of Figure 4. As can be seen therein, such diamond-shaped apertures have substantially the same dimensional axes. Hence, Wojciechowski found it necessary to employ polygonal apertures as in Figures 1 and 5, or rounded-end apertures as in Figures 6 and 7. Again, the suggestion provided by Wojciechowski is *not* to employ generally diamond shaped apertures having major and minor axes as defined by the present applicant's claims.

Hence, the suggestion that one of ordinary skill in this art would take away from Wojciechowski is not that improved flow will result. Instead, the orientation aspects of Wojciechowski's grid 24 is that non-wrinkling will ensue. Hence, no contemplation of improved flow rates through the media is suggested at all by Wojciechowski. As the

Examiner undoubtedly appreciates, an improvement in porosity does not necessarily mean that improved flow rates ensue.

Clearly, the data in Table 1 of the subject application whereby a flow rate increase of over 3.5 times was achieved by re-orienting the same sized diamond-shaped apertures so that one of the supports had the long dimension (LD) oriented in parallel alignment with the pleat axes, while the other had its LD oriented substantially transverse to the pleat axes. An ordinarily skilled person could not have even remotely been directed toward such flow rate improvements by Wojciechowski. As such, its combination with Shane clearly fails to render the present claims herein unpatentable under 35 USC §103(a).

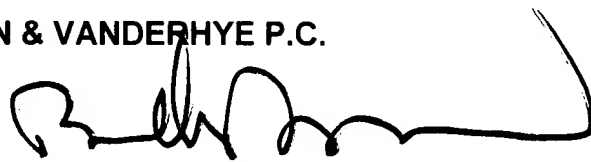
Ashelin et al is noted as the use of a PTFE as a support layer. However, such disclosure, by itself clearly fails to cure the deficiencies of Shane and Wojciechowski as discussed above. Hence, withdrawal of Ashelin et al in combination with such publications is therefore in order also.

Every effort has been made to address all issues raised in the Official Action dated September 26, 2003. Accordingly, early receipt of the Official Allowance is solicited.

Respectfully submitted,

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